DOH
Department of Housing

REQUEST FOR INFORMATION

Residential Housing Decarbonization & Retrofits

Chicago Department of Housing
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RFI Issued on: **February 6, 2023**

RFI Responses due: **March 6, 2023**

All responses and questions should be emailed to:
steph.o'connor@cityofchicago.org

Contents

1. Introduction

1.1 Purpose

Chicago is a city defined by historic architecture, innovation, and a built environment that mirrors the cultural vibrancy of its 77 neighborhoods. From the skyscraper to the Chicago bungalow, the city's vernacular building design has reflected the needs of residents. In a world increasingly impacted by climate change, Chicago must innovate once again to both protect residents and to fully participate in the mitigation of further global warming. Key to this effort will be the decarbonization of Chicago's building stock, which is responsible for nearly 70% of the City's greenhouse gas (GHG) emissions. **This Request for Information (RFI) seeks to inform the Chicago Department of Housing about how to effectively and equitably decarbonize, reducing GHG emissions in 1-4-unit residential buildings, which represent 92.9% of Chicago's housing stock.**

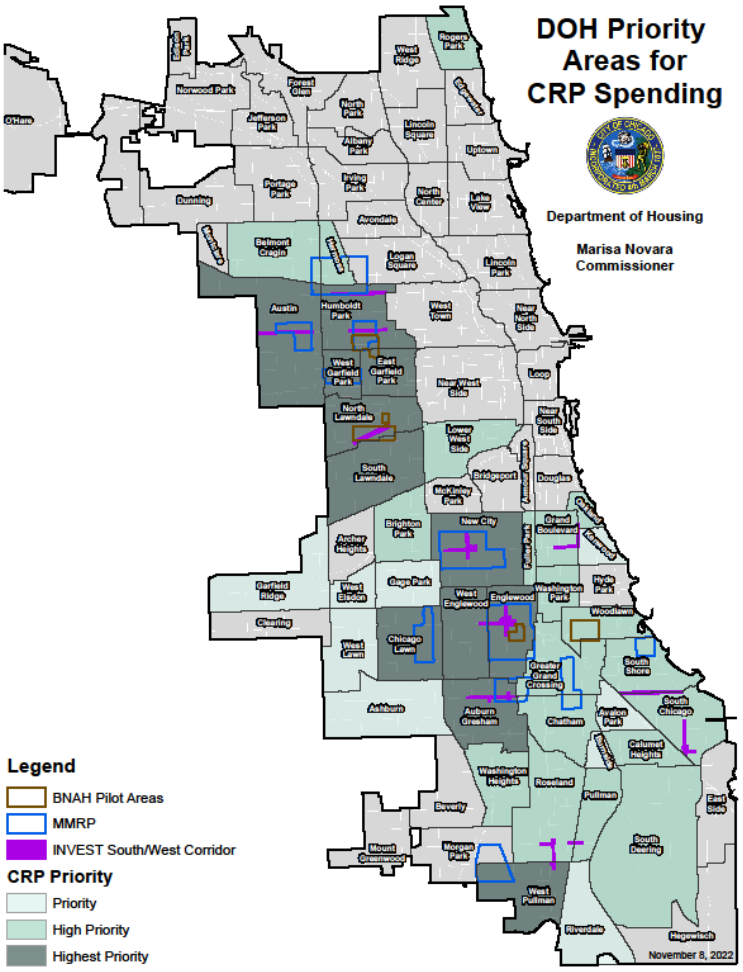
Through this RFI the Department of Housing (DOH) will gather recommendations for the implementation of an equitable energy retrofit program for small residential buildings in the City of Chicago. Specifically, the City seeks to understand how it can best leverage current local, state, and federal funding and subsidy opportunities to decarbonize single-family and 2–4-unit residential buildings. DOH aims to (1) reduce the City's overall emissions and energy use; (2) lower utility bills and improve living conditions and indoor air quality for low- and moderate-income homeowners; and (3) invest in the clean energy construction industry. The City is also particularly focused on building pathways for BIPOC workers and businessowners to meaningfully participate in the clean energy economy. DOH expects to select implementation partners for this program in mid-2023 to begin work in 2024.

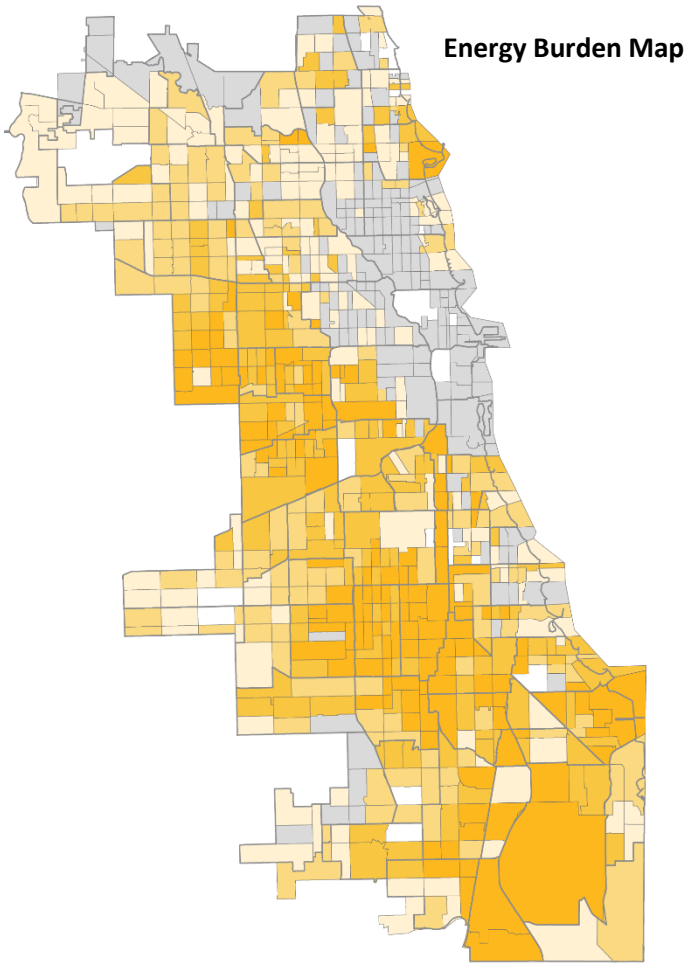
1.2 Background

In alignment with City and DOH goals, it is imperative that public resources for energy efficiency and decarbonization be prioritized in an equitable manner. Residents who rent, are older, or have lower incomes are more likely to live in older buildings with poor insulation, high utility costs, and with less control over indoor air quality and temperature. A household is considered energy burdened when they spend more than 6% of their gross monthly income on energy, and severely energy burdened when they spend more than 10%. According to Greenlink Analytics' 2021 energy burden reporting, in 2019, 22% of Chicago households experienced high or severe energy burden. These households are primarily located in the City's west, south, and far south communities, home to many Black and Latinx residents. Poor insulation, aging appliances, and deferred maintenance, along with the rising cost of electricity and natural gas, contribute to high utility bills and can have cascading impacts including limited choice in home improvements, risk of utility disconnection, and decreased credit scores. Furthermore, gas burning appliances like stoves—particularly when unvented—can be a primary source of indoor air pollution, intensifying respiratory conditions like asthma.

In response to the negative impacts of COVID-19, the City of Chicago published and is now implementing the Chicago Recovery Plan, which allocates significant federal and bond-fund proceeds to support the equitable economic recovery of communities hardest hit by the pandemic and ensure that those communities are safe and thriving. This specific residential program is expected to be initially funded with $15M of Chicago Recovery Plan funds which have been earmarked for small residential building decarbonization.

The economic impacts of COVID-19 have exacerbated housing insecurity, particularly among the City's Black, Indigenous, and People of Color (BIPOC) residents. DOH has identified highest priority areas within Chicago that represent the nexus of need, opportunity, and coordination. As shown in the two maps below, these areas are highly correlated with areas of energy burden and represent a major opportunity for the City to invest strategically.





Darker yellow indicates a higher energy burden
Source: Greenlink

The development and rollout of Chicago Recovery Plan climate and environmental justice projects is informed by several policy documents and hundreds of hours of stakeholder advisement from community and technical experts. Primarily, the City of Chicago's 2022 Climate Action Plan (CAP) establishes an interim goal to reduce Chicago's carbon footprint 62% by 2040 while ensuring that Chicagoans from all 77 community areas experience the benefits beyond the environmental impacts, including economic inclusion and savings, reduced pollution burden, equitable access to critical infrastructure, community health, and resiliency. A 2022 Report written by the Chicago Building Decarbonization Policy Working Group summarizes specific recommendations on developing an equitable building decarbonization strategy that will help drastically reduce the emissions associate from the built environment, while allowing all Chicagoans to participate and benefit from more affordably buildings due to energy and cost savings, improved air quality and occupancy comfort, and access to jobs in the growing clean energy economy. Finally, We Will Chicago is the City's first comprehensive citywide plan in more than sixty years, and includes the Climate Environment and Energy Pillar Report which aims to reduce greenhouse gas emissions, increase Chicago's resilience and preparedness for climate change and improve green spaces for the benefit of people and nature.

1.3 Expected program scope

The City intends this program to achieve the goals described above by providing low- and moderate-income homeowners in historically underinvested communities with home improvements that may include weatherization, energy efficiency, renewable energy, and electrification of household systems. Throughout this RFI, we refer to home improvements that achieve a combination of these goals as "energy retrofits."

The City welcomes information regarding a range of technologies and approaches to the following methods of decarbonization:

- Building envelope retrofits including (but not limited to) in-wall insulation; cladding/external insulation; upgrades to floors, ceilings, roofs, and basements; and air sealing
- Repairs, replacements, or upgrades of household systems and appliances, including (but not limited to) HVAC systems, water heaters, clothes dryers, ovens, stoves, and lighting
- Household electrical upgrades
- Rooftop solar/PV panels

The City encourages respondents to present technology implementations, as well as program or business models that are scalable as future resources and investment in energy efficiency become available. Additionally, the City welcomes responses that leverage existing home repair and/or weatherization programs/funds.

1.4 Eligible Respondents

The following types of entities are eligible to respond to this RFI:

1. Private/for-profit entities
    a. Developers and contractors with experience or interest in sustainable and energy efficient development, particularly in 1-4-unit properties
    b. Manufacturers, suppliers, and maintenance providers of relevant household products
    c. Designers, engineers, and architects with relevant experience/expertise
    d. For-profit electrification and energy efficiency program implementers
2. Not-for-profit/community-based entities
    a. Community-based organizations (CBOs), including those with experience or interest in administering or supporting home retrofit programs, and those with community-based knowledge of the housing needs of low- and moderate-income Chicagoans
    b. Nonprofit electrification and energy efficiency program implementers
    c. Workforce development organizations, particularly those who prepare community members for jobs in the construction industry
    d. National, regional, or local climate and energy "think tanks" and policy advocates
    e. Foundations and other potential funders
    f. Community Development Financial Institutions (CDFIs), banks, and community lenders
3. Government and utility partners
    a. Government and government-affiliated agencies with relevant expertise and/or implementers/funders of related programs
    b. Gas and electric utilities with interest/experience in electrification, benchmarking and outcomes data, and utility-based subsidies
4. Other
    a. Subject matter experts in equitable energy transition
    b. Other entities with interest in or relevant perspectives on the proposed program

2. Request for Information (RFI)

2.1 Instructions for Respondents

All eligible respondents are welcome to respond to this RFI. After reviewing RFI responses on a rolling basis, the Department of Housing may contact some respondents to request additional information, which may be delivered in writing or in a scheduled discussion with City staff.

Written submissions must include the following:

(1) Cover Page:

a. Name of organization
b. Category of respondent from section 1.3 above; identify one or multiple categories
c. Name, title, email, and phone number of contact person
d. Date of submission

(2) Executive Summary: Two-page maximum summary including a description of your idea(s) and the role your organization plays or could play in decarbonizing residential properties in the City of Chicago. If you are submitting a response in partnership with one or more other organizations, please indicate the categories each party falls into and briefly describe how your organizations collaborate. If you include a specific project, technology, or program recommendation in your responses, please provide an overview of the process and indicate the timeline for implementation.

(3) Question Responses: Typed responses to one or more of the questions below, in numerical order, and labeled with the section number and name, and question number.

2.2 RFI Questions

Respondents may address as many or as few questions as they would like. The City encourages respondents to answer any questions for which they have a perspective.

2.2.1: Respondent Profile

These questions are required for all respondents.

1. Please provide your organization's name and a short statement describing the organization.
2. Please describe any relevant experience or expertise that informs your responses.
3. Please describe your geographic area of operation and how many households you serve annually? If you serve Chicago residents, in what Community Areas do you have a presence?
4. Please describe the energy retrofit work you have completed including technology, impact, total number of buildings and units (specifying building type), and geographic location of retrofits.

2.2.2 Technical Recommendations

Technology & Equipment

5. What types of interventions would you recommend for 1–4-unit residential energy efficiency/decarbonization retrofits in Chicago? Please describe the intervention(s) recommended as well as associated costs, benefits, and energy savings.
6. Are there any interventions you would *not* recommend? If so, why?
7. Recently, heat pump technology has been widely touted as an integral component for building decarbonization though there is concern about their performance in cold climates. Please describe in detail the performance of any cold climate

decarbonization technology that you have installed or researched, specifying building type.

8. Describe any known potential challenges of installing heat pumps, or any other technology you mentioned in your response to Question 5, in existing residential buildings. Please be specific by building/subsector type or function within the building, such as space heating, water heating, etc.
9. Supply chain issues have been well-documented in the past few years when purchasing equipment from heat pumps to solar panels. Please describe any experience related to the purchasing of renewable energy, decarbonization or energy efficiency products and how you would mitigate delays.
10. Please share your thoughts on a program that would not allow any purchase or installation of natural gas solutions.

Licensing, permitting, building codes, and workforce

11. What permits or licenses would be required to implement the above interventions? Does your organization already have any relevant licenses or partnerships with organizations or contractors that do? How long do you expect the relevant permitting processes to take?
12. Are there any components of relevant permitting or licensing processes or building codes that make performing this work difficult or that you recommend the City evaluate or modify?
13. What experience do you have with BIPOC workforce engagement, training and/or utilization? How would you develop a program to include meaningful and sustainable participation from BIPOC tradespeople and emerging trades businesses? Are there partner organizations that you work with? Please be specific.

Assessments, Auditing & Analysis

14. Please describe your recommendations on implementation of an energy assessment or audit process associated with each energy retrofit. What would you seek to evaluate to confirm the retrofit's efficacy and value? What are the data needs, technologies and tools utilized, staffing needs, and expected costs associated with your proposed analysis? Describe the outputs in an energy assessment. In what ways could this be streamlined across a large group of homes?
15. There are many different types of residential housing structures. Please describe any building typology analysis and how various interventions perform in different building types.

2.2.3 Program Deployment

Where section 2.2.2 refers to the specific technology, capital investments, and physical interventions that may be made in a home receiving an energy retrofit. Sections 2.2.3 and 2.2.4 refer to the design of a program intended to effectively reach and serve the target population.

Program design

16. Please describe the program you would recommend DOH implement to reduce emissions and energy use, lower utility bills, and improve indoor air quality for low- and moderate-income Chicagoans. Please include the following details in your program design:
    a. Deployment and construction approach
    b. Estimated timeline from energy assessment to installation, including any relocation of homeowners, and potential threats to this timeline
    c. Program evaluation including outcomes and key performance indicators
    d. Job training and workforce development integration, including brief summary of initial engagement, bid development and selection process
    e. Pre- and/or post-installation education or training for recipients
    f. Ongoing maintenance and long-term support
    g. Alignment with the City's goals for an equitable transition to 100% clean energy by 2035 and the Climate Action Plan interim goal of reducing Chicago's overall emissions by 62% by 2040
    h. Outreach and engagement of residents, particularly in reaching non-English speakers
    i. Development of decarbonization-focused 1-page case studies/project snapshots and/or other communications to demystify decarbonization and/or specific technologies, for utilization in broader citywide engagement by the City
17. Please describe any household targeting including any relevant criteria like income, housing type, geographic location, etc. Please specify community areas or neighborhoods if appropriate.
18. Please describe any reference programs that may provide a model for using these funds.
19. Please describe your approach to dealing with instances of deferred maintenance and how you would evaluate feasibility of completing an energy retrofit in each residence. Is there an acceptable threshold for deferred maintenance? If so, please describe. Please describe examples (if any) where electrification or decarbonization are not a good fit.

Program costs

20. What capital cost per home (or per unit for 2-4-unit buildings) do you estimate would be required for your suggested program? Please describe the source(s) of information and experience used to craft these cost estimates and be specific about cost differences between types of buildings by age, type, etc.
21. How should the City leverage existing incentive programs in the design and implementation of a retrofit program? Incentive programs may include utility rebates, state and local subsidy programs, and federal programs including the new subsidies and tax credits enacted by the 2022 Inflation Reduction Act. Please be

specific about eligible incentive programs and how a DOH program could be designed to enable access to them and how this would be administered.

22. What administrative costs do you estimate the program might require? *We encourage you to express these costs in a pro-rata/cost-per-delivered retrofit manner.*

2.2.4 Program implementation specifics

The following questions are reserved for organizations interested in responding to an eventual program RFP and/or directly participating in the implementation of a DOH energy retrofit program.

23. How long would it take to stand up your suggested program, from selection to construction?
24. Factoring in equipment availability and staff/subcontractor capacity, how many households would you be able to serve per year?
25. Do you anticipate any challenges with your approach to implementation?
26. How will you deliver services to clients? Please include information about displacement during work, duration of work, and how you will assistance clients in accessing potential tax benefits like rebates or credits, etc.
27. If your organization currently works or previously worked for the City of Chicago (e.g. as a subcontractor, qualified TOR respondent, or delegate agency), please describe this work.

3. Information Resources

3.1 Housing & Environmental Data

There are nearly 400,000 single-family homes and small multifamily properties in the City of Chicago which generated 14% of the city's total carbon emissions in 2017. Nearly 93% of Chicagoans live in these types of buildings, making energy efficient retrofits a key aspect of ensuring equitable decarbonization. To reach the City's 2030 clean energy goals, 78,500 buildings must be retrofitted and to reach the City's 2050 goal, 196,000 buildings must be retrofitted.

3.2 Current Chicago Equity Initiatives

The City of Chicago has an Equity Statement of Principles that underlies its approach to addressing policy challenges and improving the daily lives of Chicagoans. The City encourages all respondents to review the Statement here. The City of Chicago defines equity as both an outcome and a process, which is why the City's 2022 Climate Action Plan (CAP) is built around climate actions that deliver multiple, meaningful benefits to residents and their communities while also reducing emissions. These co-benefits include (1) economic including and savings; (2) reduced pollution burden; (3) equitable access to critical infrastructure; and (4) community health and resiliency. In practice, this means investing in climate actions that solve the priorities of overburdened and frontline

communities and using climate related investments to drive new opportunities and benefits to those most at risk of impact or further burden.

Most citywide initiatives focus on the Community Area – a geographic division that loosely aligns with neighborhoods. The City of Chicago is made up of 77 Community Areas. Information about the Community areas, including spatial boundaries, can be found here.

3.2.1 INVEST South/West

INVEST South/West is Mayor Lori Lightfoot's signature community development initiative to reverse decades of disinvestment on Chicago's South and West Sides. The ten target community areas are Auburn Gresham, Austin, Bronzeville, Greater Englewood, New City, North Lawndale, Humboldt Park, Greater Roseland, South Chicago, and South Shore. Since its kickoff in 2019, the City has aligned more than $2.2 billion in public and private investment in these community areas. The initiative is providing support for small business, creating public realm improvements, restoring historic buildings, and fostering equity and resilience where it's needed most.

3.3 Chicago Sustainability Initiatives

3.3.1 Building Decarbonization Policy Working Group

Mayor Lori Lightfoot convened a Working Group in June 2021 to develop the initial set of strategy recommendations for an equitable building decarbonization strategy. This group was comprised of 53 community and technical experts, thought leaders, and affected stakeholders from community-based and civic organizations, government, academia, architecture and development, energy, and other utilities, industrial and manufacturing, trade organizations, workforce development and nonprofits. Published in October 2022, this report highlights four focus areas for policy recommendations:

1. Leverage known pathways to achieve net carbon neutrality in all new buildings
2. Help building owners navigate pathways to improving building energy use and performance
3. Build, develop, and support the social, financial, and technical resources that result in a self-sustaining clean energy economy
4. Fund and prioritize equitable community engagement that cultivates resilient partnerships and advances hyperlocal benefits

3.3.2 Chicago Recovery Plan's Sustainable Infrastructure Initiatives

Through the Chicago Recovery Plan, the City will invest a total of $188 million in climate and environmental justice initiatives. Outside of the low- and moderate-income housing retrofits which this RFI addresses, the City will also invest in:

- **Additional Energy and Equity-centered projects:** In addition to this program, the city will also retrofit and decarbonize affordable multifamily building; retrofit community anchor institutions by expansion of the Neighborhood Power Project;

install solar on several neighborhood libraries; and develop a community solar installation on a city-owned asset.

- **Equitable Expansion of Tree Canopy and Green Infrastructure projects**: The City has committed to planting 75,000 trees in areas of the city with the lowest tree coverage; expanded funding for Space to Grow, a partnership program between the City, Chicago Public Schools and the Metropolitan Water Reclamation District to create new playground and garden space that also serves to capture stormwater runoff; expanded funding for the City's successful "green alleys" program; and targeted investments in community areas with significant flooding issues.
- **Community Climate Investments:** Includes a broad range of community-focused projects including the African American Heritage Water Trail; a composting pilot program in six community gardens; development of a residential organics waste hauling program; environmental remediation of the heavily polluted Schroud site; expansion of air quality monitors and partnership with community organizations for deployment and reporting; the Climate Infrastructure Fund that provides grants to nonprofits and small businesses for specified climate infrastructure projects; a low carbon mobility project to provide free bikes to Chicagoans with disparate access to transit; clean water restoration along the south branch of the Chicago River; and decarbonizing 10% of the City's light duty vehicles in its fleet.

3.3.3 Historic & Ongoing Effort

The City of Chicago is committed to a 62% overall reduction in GHG emissions by 2040 and powering 100% of its buildings with renewables by 2035. Integrating the ideas of multiple pathways to decarbonization – the city embraces energy efficiency, electrification, renewable energy – while understanding that there is not a one-size-fits-all solution for every building or every homeowner. Underlying all pathways is the centering of equity – developing the social capital and resources to support these initiatives through a strategy that lowers economic burdens on residents and businesses, reduces energy insecurity for communities of color, and uses an equity lens to assess the cost and impact of these strategies.

There are a variety of actions the City of Chicago has undertaken or in in the process of implementing that have guided the City to the current Climate Action Plan and existing strategies including:

- Chicago Sustainable Development Policy
- Chicago Construction Codes
- Retrofit Chicago
- Energy Benchmarking
- 2022 City of Chicago Budget
- We Will Chicago
- Municipal Clean Energy Transition by 2025
- Green Recovery Agenda
- Chicago Recovery Plan

4. Submission Conditions

This is an RFI only and not a solicitation or offer to contract with any respondent. Submission of a response does not bind the City to any agreement for services or any other work. This does not constitute a Request for Proposal (RFP), Request for Statement of Qualifications (RFSQ), Invitation for Bids (IFB), Purchase Order (PO), or a promise to issue a solicitation now or in the future. The information obtained as a result of this RFI may be used by the City to prepare and release a future solicitation to solicit proposals to perform the services described in this RFI. The City may also elect to take no further action. The City does not guarantee that the RFI will lead to any further action related to residential decarbonization and retrofitting.

At any time, at its sole discretion, the City may, by written addenda to this RFI, modify, amend, cancel and/or reissue this RFI.

4.1 Confidential and Proprietary Information

The City of Chicago will endeavor to protect from disclosure any confidential and/or proprietary information the Respondent submits to the City pursuant to this RFI in accordance with applicable law, provided that the Respondent shall specifically identify those portions of the response to the RFI that are deemed to be confidential, proprietary information, or trade secrets.

Such information deemed by the respondent to be confidential and/or proprietary shall be easily separable from the non-confidential/non-proprietary sections of the response to the RFI. Marking the entire response to the RFI as confidential or proprietary will result in the submission being deemed not confidential and/or proprietary and thus not protected from disclosure.

Respondents shall be aware that the City may be required, pursuant to the Illinois Freedom of Information Act (FOIA), 5 ILCS 140/1 et seq., to disclose the public information submitted to the City in response to this RFI or otherwise.

4.2 Information Preparation Costs

The City shall not be liable or responsible for any costs incurred by a respondent in the preparation, submission, presentation, or revision of its information, or in any other aspect of the respondents' pre-information submission activity. No respondent is entitled to any compensation except under an agreement for performance of services signed by a City-authorized official and the respondent.

4.3 Submission and Questions Regarding this RFI

Please submit all responses, as well as any questions to steph.o'connor@cityofchicago.org. The City will publish written responses to all questions received to the RFI webpage. The City may also choose in its discretion to conduct follow-up interviews with some or all respondents.